Transport Canada Transports Canada

TP 1624

Marine Casualty Investigations

Enquêtes sur les accidents maritimes

Investigation Report to the Minister pursuant to sections 542 or 545 of the Canada Shipping Act

Rapport d'investigation au Ministre conformément aux articles 542 ou 545 de la Loi sur la marine marchande du Canada

Canada

90-04791/

Ce rapport est aussi disponible en français.

INVESTIGATION REPORT INTO THE CIRCUMSTANCES ATTENDING THE DROWNING OF THE SKIPPER OF THE CANADIAN YACHT "SOUTHERN STAR II" WHILE ON A CHARTER CRUISE IN TORONTO HARBOUR, LAKE ONTARIO ON AUGUST 2, 1986.

REPORT No. 458

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INVESTIGATION REPORT INTO THE CIRCUMSTANCES ATTENDING THE DROWNING OF THE SKIPPER OF THE CANADIAN YACHT "SOUTHERN STAR II" WHILE ON A CHARTER CRUISE IN TORONTO HARBOUR, LAKE ONTARIO ON AUGUST 2, 1986.

Particulars of Vessel

Name	"SOUTHERN STAR II"
Official Number	325813
Port of Registry	Toronto
Call Sign	VC5581
Gross Tonnage	48.70
Net Tonnage	24.43
Registered Length	20.12 m (66 feet)
Breadth	4.27 m (14 feet)
Depth	1.59 m (5.20 feet)
Draught	F: 1.5 m (5 feet) A: 1.5 m (5 feet)
Type	Yacht
Built	1934, Wilmington, Del. USA
Material	Wood
Propulsion	Two, Detroit Diesel '671' engines of 225 b.h.p. each, twin screw, bridge controlled, driving fixed pitch propellers
Owner	Uncle Sam's Chartering Service Ltd. Weston, Ontario
Crew	4
Guests	28

Navigating Equipment

Radar	Si-Tex / Koden
VHF 1	Sea Command by S.B.E.

VHF 2	VHF Radio Telephone
Cellular Telephone	Fitted
Magnetic Compass	Wilfred O. White Constellation
Autopilot	Ware
Loud Hailer	Inmar Hailer S.S. 1000
Searchlight	Fitted

Certification

None

Description of Vessel

The "SOUTHERN STAR II" is a twin screw pleasure craft of wooden construction having a raised foredeck. (See attached photographs). Forward of the break and below the raised foredeck is the galley. Aft of the galley are two dining saloons housed in the deck-house. Abaft the saloon, the space is divided into two levels with the upper level leading to the wheel-house cum bridge containing the navigation equipment and engine controls, and the lower level comprising the engine-room. The deck behind the wheel-house has been enclosed and glassed in, with a bar fitted at the after end. Below this section are three cabins used as crew accommodation. A swim platform is fitted just above the water level outside the transom stern. There is an intercom system fitted with telephones at strategic locations.

Note All times in this report are expressed in Eastern Daylight Saving Time (UTC minus 4 hours).

Background

The vessel was returning from a night-time cruise around Ontario Place. While heading eastward towards the Toronto Harbour Western Gap, a guest on the foredeck lost his balance and fell over the starboard railing into the lake. The alarm was sounded immediately and the propellers were stopped. Another guest ran aft, undressed down to his jeans and descended onto the swim platform where he was handed a lifebuoy. He then jumped into the water and swam with the lifebuoy towards the man in the water. The skipper also jumped into the water fully clothed, to assist. Another lifebuoy was thrown overboard.

The vessel was manoeuvred to bring the people in the water to the swim platform on the stern and two men were hauled aboard. The skipper had disappeared. The police searched for him and his body was recovered a few hours later.

This accident again raised the issue of pleasure craft under charter carrying a considerable number of people, yet the vessel was not subject to the provisions of the Canada Shipping Act with respect to inspection by the Ship Safety Branch of the Canadian Coast Guard; however, lack of such inspection is not considered a factor in this casualty.

Particulars of Deceased

Name	Salvatore Silvestri
Position aboard vessel	Skipper
Age	36
Address	Toronto

Narrative

An automobile establishment chartered the "SOUTHERN STAR II" to take their employees and friends for an evening cruise around Toronto Harbour, Toronto Island and Ontario Place. The booking was made early in June, and it was then estimated that there might be about forty people in the party.

At 1845 on Friday August 1, 1986, the guests started arriving on board the "SOUTHERN STAR II" berthed at Pier 6 at the foot of York Street. With thirty-eight people in the party including 2 entertainers, the vessel left the pier at 1930 for the cruise. The skipper was at the wheel and the three other crew members were engaged in dispensing food and refreshments.

It had previously been arranged that they would return to Pier 6 at 2130 to land the two entertainers, and at about this time the vessel landed six persons. After leaving the pier again, four more people expressed a wish to leave and the "SOUTHERN STAR II" went alongside briefly at Harbourfront to land them.

In ideal weather conditions, the cruise was resumed at a leisurely pace and the vessel eventually went through the Western Gap for a visit to Ontario Place. They entered Ontario Place Marina and left without going alongside.

At sometime after midnight, estimated at 0010, while heading eastward in the direction of the Western Gap, a guest on the foredeck lost his balance and fell over the railing on the starboard side. The incident was seen by guests and the splash was heard. The skipper was informed immediately and there were shouts of 'Man Overboard'. The position of the vessel at the time was about ½ mile south of Ontario Place being approximately Lat 43°37'N Long 79°25'W. The propellers were stopped. Another guest ran aft, stripped to his jeans, descended onto the swim platform, and was handed a lifebuoy attached to a 27 m line which was positioned nearby. He jumped into the water and pulling the lifebuoy, swam towards the man. The boat reportedly was 'put astern' towards them and then the engines were stopped. The skipper went aft and jumped in the water, fully clothed, to assist the first guest.

As the vessel was drifting away, the skipper shouted for the boat to be turned around and brought towards them. The engines were started again and the skipper's wife (the mate) eventually manoeuvred the boat so that the people in the water were near the swim platform. Two men were hauled on board, but the skipper had disappeared. A message was broadcast on the VHF Radio at 0016, August 2. A unit of the Toronto Metro Police Marine Division acknowledged the message, responded immediately and arrived on the scene at 0022.

On being informed of the situation, the Police marked the position with a marker buoy and started searching. More units were assembled and they commenced dragging operations at 0130. An officer navigated the "SOUTHERN STAR II" back to Pier 6 where the guests disembarked. The person who had fallen overboard and recovered in a semi-conscious state, was removed to St. Michael's Hospital, and after being treated and given tests, he was released at 0730 the same day.

The body of the skipper was recovered at 0515 near the marker and removed to the marine base to await the coroner. A subsequent autopsy report indicated that the cause of death was drowning.

Analysis

1. History

The "SOUTHERN STAR II" was built in Wilmington Del., USA in 1934 as a pleasure yacht and named "CERAMIC", she was brought under Canadian registry in October 1966. As the "CERAMIC", she was purchased by Uncle Sam's Chartering Service Limited in July 1982, and renamed "SOUTHERN STAR II" in August 1983. The owner used the vessel for charter

purposes in Toronto Harbour. Brochures advertising the services and amenities were published.

2. **Inspection**

The "SOUTHERN STAR II", a pleasure yacht, was not inspected by the Ship Safety Branch of the Canadian Coast Guard nor was she required to be under the Canada Shipping Act. (See Annex I for excerpts from the Canada Shipping Act).

3. **Crew**

The vessel carried a crew of four, including the skipper who was also the owner through his holding in the Chartering Service Company. His wife and two others comprised the remainder of the crew. Although the skipper normally handled the vessel, his wife was also well experienced at the controls. They both had approximately 4 years experience on the vessel. Although the other crew members could assist in handling lines on docking and undocking, they were mainly engaged in the catering aspects.

The vessel's engines were on bridge control and there was no engineer as such, but the skipper was, reportedly, knowledgeable of the engine-room systems. General visibility from the wheel-house was good for navigation purposes.

A skipper's prime function aboard any vessel is the safe operation of his vessel and the safety of all people aboard. It is his responsibility to organize and ensure that his crew, by training, is able to respond, under his direction, to any emergency which may arise. A skipper must stay at a focal point on the vessel, normally the wheel-house, to control and direct the operation. There are few, if any, occasions involving an emergency to his vessel, that the skipper should have to leave the vessel, except for final abandonment.

4. **Weather**

The weather at the time of the casualty was reported to be calm with a smooth sea. At Toronto Island airport the air temperature was about 17°C. At 1300 on the same day, the lake surface temperature at the position of the casualty was 16°C (61°F) at the surface and the temperature at the bottom was 12°C (54°F).

5. **The charter and alcohol involvement**

The same party had chartered the "SOUTHERN STAR II" to their satisfaction in July, 1985. Early in June, the booking for

the evening of August 1 was made by telephone. The arrangements were that there would be about forty people in the party, subject to confirmation. There was a written agreement; the catering was to be provided by the vessel. The "SOUTHERN STAR II" had not applied for, nor had she received an Ontario Liquor Licence which is mandatory if liquor was to be served aboard the vessel. Hence, arrangements were made that the party would bring their own liquid refreshments and that there would be a charge for the services of a barman plus corkage.

Several of the guests had apparently indulged freely and it was indicated that the person who fell over the side had certainly consumed a quantity of alcohol. There was conflicting evidence respecting how he fell, ranging from losing his balance whilst walking aft, to falling over the side whilst leaning overboard in attempting to vomit.

A toxicology report (which includes blood/alcohol tests) on the skipper's body was negative. The recovered guest was subjected to tests on arrival at hospital but such test results are considered confidential by hospital authorities and are not released.

6. The foredeck

The deck area in the fore part of the vessel is triangular in shape, and is provided with small benches on the port and starboard sides and a locker aft, for seating. It is fenced by a single guard rail of 2.5 cm (1") diameter stainless steel pipe supported by sloping stanchions fitted to the deck close inboard of the 25 cm high by 10 cm, (10" x 4"), solid bulwark. The height of this rail is 81 cm (33") at and above the stem, decreasing to 54 cm (21.25") at a distance of 5 m from the stem so that it was about 56 cm (22") high in the position where the man fell overboard. The side bench here is 25 cm (10") high by 25 cm wide and is located close inboard of the rail stanchions. Several of the guests were seated or standing on the foredeck when the man fell overboard.

The view of the foredeck from the steering position is obscured by the deck-house from right ahead to about 20° on the starboard side so the accident was probably not observed by the skipper.

7. The alarm

The incident was seen by other guests and the splash was heard by a member of the crew standing in the galley. There were shouts of 'Man Overboard', one crew member ran to

inform the skipper and then went aft to guide the vessel as she was manoeuvred towards the person in the water. Several other people rushed to the stern and a lifebuoy was thrown into the water. The propellers were reversed, and the "SOUTHERN STAR II" was backed towards the man in the water and then stopped, but the exact manoeuvres were not remembered.

8. **The rescue**

A guest on the foredeck who glimpsed out of the corner of his eye saw the person falling overboard, and heard the splash. He ran aft along the starboard side to the stern and started to strip off his clothes to the waist. Climbing over the stern railing, he descended onto the swim platform and searched for the man in the water. It was dark; after a while he saw a head in the water astern of the vessel and a little to port. The lifebuoy with the 27.5 m line attached was thrown in the water and he jumped in after it, and swam towards the head. When a short distance away, the head disappeared under water.

The swimmer continued on and found that the man had submerged a few inches and appeared unconscious. With difficulty, the man was pushed under and into the centre of the lifebuoy, and lodged there by means of the lifebuoy grab line. When the swimmer pulled on the buoyant line attached to the lifebuoy to haul them both towards the vessel, it did not appear to him that this line had been made fast to anything. Current in the area at the time was negligible and is not considered to be a factor.

Swimming back towards the vessel and pulling the lifebuoy with him, the rescuer came across the skipper's uniform cap. The "SOUTHERN STAR II" was brought to the two men in the water and they were hauled aboard. Other guests attended to the rescued man who had swallowed a lot of water and revived him.

There is conflicting evidence on the distances between the men in the water and the vessel at the various stages of the rescue. The length of time the men were in the water is not precisely known.

9. **The skipper**

After going astern on the engines, the vessel was manoeuvred stern first towards the first man in the water. The skipper stopped the engines and left the steering position. He then jumped into the water, fully clothed, to assist the man. His uniform hat was seen to fall off as he went in. It was

reported that the vessel's searchlight was not working and that it was quite dark; the lights from Ontario Place were the principal source of illumination.

After jumping into the water and being seen near the lifebuoy, it seems the skipper called out to his wife to turn the boat around and bring it towards him. This was accomplished by manoeuvering towards the lighted lifebuoy light. The skipper could not be seen. The skipper was considered to be a good swimmer but had recently finished a large meal.

10. The search

When only two men were brought to the stern of the boat, some people started scanning the waters for the missing skipper. An emergency call was made on VHF Radio, Channel 16, at 0016 August 2, which was immediately answered by a unit of the Toronto Metro Police Marine Division that was under way, inside the Western Gap.

This unit arrived at the "SOUTHERN STAR II" at 0022 and dropped a marker buoy at the bow of the stationary vessel. A visual search of the area was started and two other units were summoned; they assisted in searching the area and along the shore lines of Ontario Place and Toronto Island at the Airport. A police officer navigated the "SOUTHERN STAR II" back to Pier 6, arriving there at 0200, and the guests were allowed to go home upon completion of the police investigation.

Dragging operations were started at 0130, and continued until 0515 when the body of the missing skipper was found in 12 m (38') of water at a position about 15 m (50') south of the marker buoy. The body was taken ashore to the marine base to await the arrival of the coroner.

11. Survival time

The water temperature was about 16°C on the surface and 12°C on the bottom. A Canadian Red Cross Society publication entitled Cold Water Survival shows that with a seawater temperature of 12°C, a person has a good chance of survival if rescued within 2 hours. After 2 hours and up to 3 hours, a person has a 50% possibility of survival if rescued, but the victim will be weak and unable to assist rescuers. These figures are averages and would vary depending upon the physical condition and age of the person, whether injuries have been sustained, and weather conditions at the time of the accident.

(For excerpt of the chart, see Annex II)

12. **Coroner's Inquest**

A cardiologist who appeared as an expert witness at the Coroner's Inquest indicated that as in the case of Mr. Silvestri, people who do not have medical problems, who are in good health, gocd spirits and are good swimmers can also drown. He further indicated that any person who enters the water in a hurry or from any height at all, especially at night, may surprisingly become disoriented and may not come back to the surface.

13. **Toronto Harbour Commissioners By-Laws respecting navigation within the limits of the Port and Harbour of Toronto.**

By-Law No. 7 of the Toronto Harbour Commissioners states in part:

BY-LAW NO. 7

PART II

LICENSING OF OPERATORS OF POWER VESSELS

7. No person shall operate a power vessel within the Port and Harbour of Toronto unless licensed to do so under provisions of this Part.

10.
(1) No person shall be licensed to operate nor shall any person operate a power vessel until such person shall have passed a satisfactory examination by the Harbour Master or by some other person designated by the Commissioners as to his capability as an operator, which examination may include a test of the knowledge on the part of such person of the mechanism and operation of a power vessel and of the By-laws of the Commissioners and other marine regulations in force.

(2) Upon the applicant passing such examination to the satisfaction of the Commissioners, the Commissioners may issue such applicant an operator's licence.

11. All operator's licenses shall expire on

> the 31st day of December in each year unless sooner revoked or suspended, but upon payment of the prescribed fee, in the discretion of the Commissioners, may be renewed without further examination (unless the Commissioners deem a further examination desirable) upon production of the expired licence.

The skipper of the "SOUTHERN STAR II" was issued such an operator's license for 1986.

14. Search and Rescue Prevention

Information on the national SAR objective contained in the National Search and Rescue Manual states in part:

> The national SAR objective is met through two areas of activity:
>
> a. SAR operations aimed at detection, response and rescue; and
>
> b. SAR prevention aimed at reducing the number and severity of SAR incidents through education and the enforcement of relevant regulations.

Part of the education is carried out by members of the Canadian Marine Rescue Auxiliary who conduct 'courtesy examinations' of private pleasure craft.

In the interests of safety within the Port and Harbour of Toronto, the Toronto Harbour Commissioners invoked the provisions of By-Law No.7, PART III, subsections 18 and 19 which read as follows:

PART III

> 18. No person shall operate any vessel or craft in a negligent manner nor operate any vessel or craft which is not seaworthy or safe; negligent operation includes the operation of a vessel in such a manner as to interfere unnecessarily or unreasonably with the free and proper use of the waters, beaches, docks or wharves by other craft or persons, or to endanger other craft or any person upon such other craft or in the water or upon the vessel itself.
>
> 19. The Commissioners may at any time but

> shall not be required to inspect any vessel,.....

This requires that private pleasure craft engaged in the charter business and leasing their docks or wharves for the embarkation of persons, have a 'courtesy examination'. The examinations are carried out by an Officer of The Toronto Harbour Commission with qualifications approved by Search and Rescue Branch of the Canadian Coast Guard.

Upon satisfactory completion of the examination, a Transport Canada Courtesy Examination Form For Pleasure Craft and a Canadian Coast Guard Courtesy Examination decal bearing a number and the year of the examination, is issued.

There is no inspection of the hull of the vessel during the examination.

The items of equipment examined are those required by the Small Vessel Regulations. Printed on the form and above a check list of compulsory equipment is the statement:

> THIS EXAMINATION INDICATES ONLY THAT COMPULSORY SAFETY ITEMS NO. 1-23 WERE ON BOARD AND IN GOOD ORDER ON THE EXAMINATION DATE SHOWN.

The "SOUTHERN STAR II" had previously been examined on June 18, 1984 and a decal was displayed prominently on the vessel. Arrangements had been made for the next examination during the week commencing Monday, August 4, 1986 when the vessel would be available during the afternoons.

15. Drills

'Man-overboard' drills which may have been appropriate for the vessel were said to have been carried out on previous occasions by the skipper and the other permanent members of the crew when engaged on charters south of Toronto Island. On some charters, some of the guests liked to swim in the lake. The "SOUTHERN STAR II" would anchor south of the island and the crew would exercise in retrieving people from the water.

On the charter on August 1, the guests were not informed of the procedures to be carried out in case of emergency, nor were they told of the stowage positions of the life-jackets.

There were no signs posted indicating the stowage positions of the lifejackets.

There are no requirements in the Small Vessel Regulations for drills to be carried out on private pleasure craft, but good seamanship dictates that life-saving appliances be readily available to all on board and that stowage of lifejackets be plainly marked.

16. **Lifejackets**

At the commencement of the charter, there were forty-two persons on board (4 crew and 38 guests).

The investigation revealed that there were forty-one approved lifejackets on board, and two lifejackets of U.S. manufacture in the engine-room which were not approved. Hence, the vessel did not comply with Section 21(a) of the Small Vessel Regulations at the start of the cruise; however this is not considered to be a factor in this casualty. This regulation requires an approved lifejacket for every person on board. (For excerpts of this regulation see Annex III).

17. **Lifebuoys**

Located on the deck at the stern on either side of the vessel were two approved 762 mm diameter lifebuoys, one lifebuoy was fitted with an approved self-igniting electric light and the other had a 27.5 m (90 feet) buoyant heaving line attached. In the confusion with the three persons in the water, the line does not appear to have been tended at first, but a guest managed to secure the inboard end of the line before it went completely over the side.

18. **Radio Sation Licences**

The "SOUTHERN STAR II" was fitted with radio telephones as required by the Ship Station Radio Regulations for a vessel over 20 m in length.

The Radio Act requires all radio stations to be licensed by the Minister of Communications. The radio licence generally specifies the call sign and the frequencies to be used for transmitting.

Section 21 of the General Radio Regulations, Part II states in part:

> The frequencies, band width, type of emission and power used shall be as specified by the Minister.

The ship radio sation on board the "SOUTHERN STAR II" was

not licensed.

19. **Radio Operator's certificate requirements**

The General Radio Regulations, Part II made pursuant to the Radio Act state in part:

> 78. The apparatus of all radio stations shall be worked only by operators holding a Canadian certificate of proficiency....
>
> 88. The holder of a Restricted Radiotelephone Operator's Certificate (Maritime) may act as a radiotelephone operator on a ship station,....

No member of the crew of "SOUTHERN STAR II" held a Restricted Radiotelephone Operator's Certificate (Maritime).

To obtain a Restricted Radiotelephone Operator's Certificate (Maritime), an examination in radiotelephone operating procedures and regulations is conducted by the DOC Radio Inspectors. Upon satisfactory completion of the examination, the certificate is issued to the candidate and is valid for the lifetime of the holder (it is not renewed or updated). There is presently no fee for the exam or certificate.

20. **Crew certification**

The skipper of the "SOUTHERN STAR II" was not certificated, nor was he required to be under the Canada Shipping Act. However, the skipper was in possession of a valid operator's licence issued by the Toronto Harbour Commissioners to conform with their By-Laws. Before entering the charter-cruise business, he was self-employed ashore and had previously owned two other pleasure craft.

He had taken a diving course and owned a self-contained underwater breathing apparatus. With this apparatus he was able to do underwater maintenance on the vessel and had changed the propellers and shafts while afloat. He had been diving for about five years.

Findings

The skipper of the "SOUTHERN STAR II" drowned, in good weather conditions, when attempting to assist in the rescue of a man who had fallen overboard while on a cruise in Toronto Harbour. Precisely why the skipper chose to jump overboard is

not known, however:

- jumping into the relatively cold water at night without donning a lifejacket was reckless;

- although considered a good swimmer, he had recently consumed a large meal;

and it would appear that:

- however well intended the skipper's actions, he should have delegated any direct rescue action that was required;

- any 'man overboard' plans instituted by the skipper were not adhered to;

- the good manoeuvrability and the freeboard of the vessel was such that persons could be taken from the water with rescuers remaining on the swim platform; and

- the non-availability of an efficient searchlight and thus lack of illumination, delayed the retrieval of the men in the water.

Other Findings

There was no delay in informing the Toronto Metro Police Marine Unit and they responded immediately.

The rescue of the man who fell overboard was achieved satifactorily without the intervention of a third person in the water.

One of the required number of lifejackets on board at the start of the cruise was not of an approved type.

Although not required by regulation, the stowage of life-jackets was not clearly indicated, nor had guests been given any instruction regarding procedures to be carried out in case of emergency in accordance with good seamanship practice.

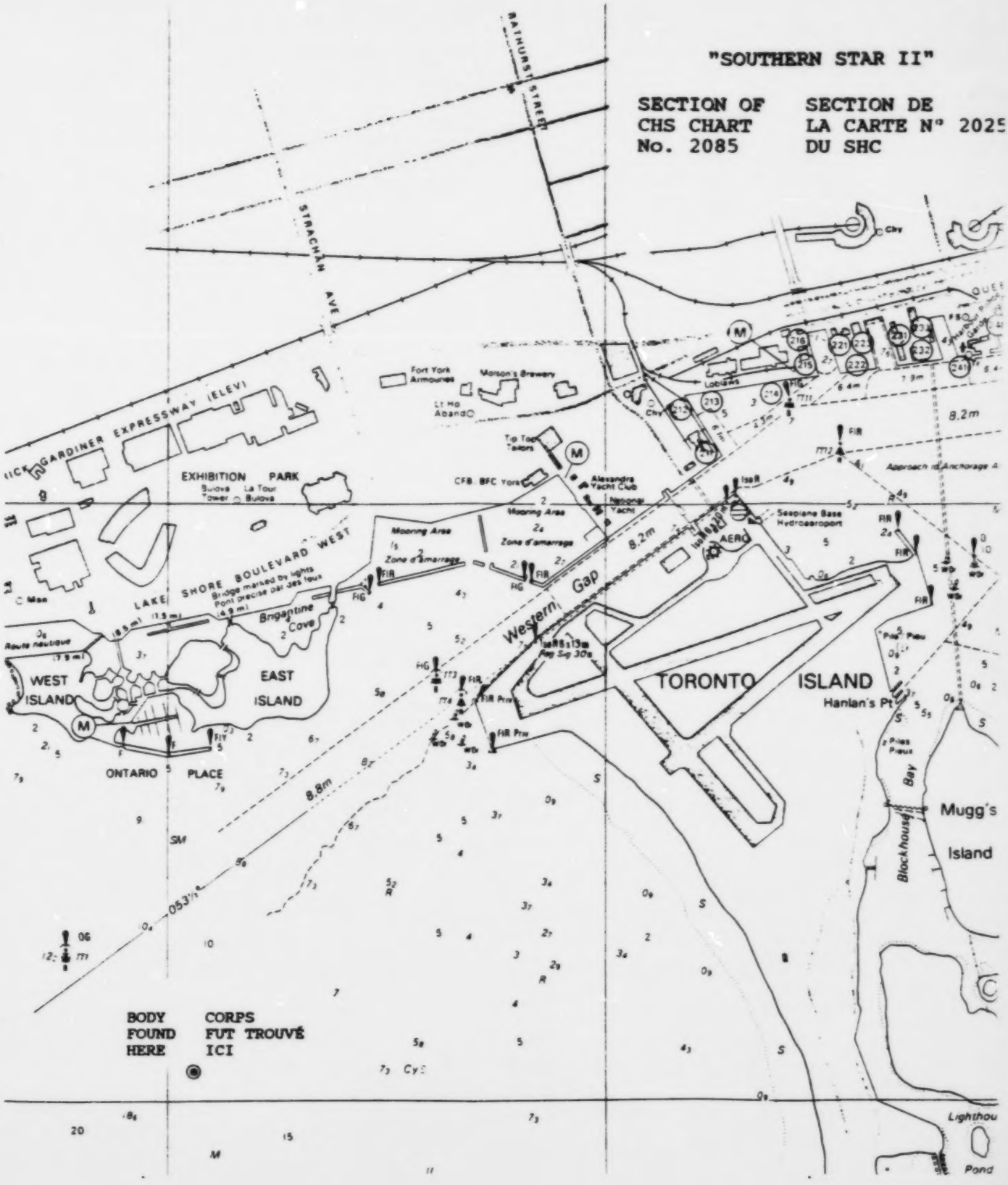
The vessel's radio station was not licensed nor were the radio operators in possession of Restricted Radiotelephone Operator's Certificates (Maritime) as required by the General Radio Regulations, Part II.

OTTAWA, ONTARIO
JANUARY, 1987.

"SOUTHERN STAR II"

SECTION OF CHS CHART No. 2085

SECTION DE LA CARTE N° 2025 DU SHC



CHAP. S-9-1970

CANADA SHIPPING ACT

LOI SUR LA MARINE MARCHANDE DU CANADA

Exceptional Vessels and Exemptions from Inspection

Navires d'exception et exemptions d'inspection

Regulations affecting pleasure yachts

466. (1) Subject to subsection (2), pleasure yachts are exempt from annual inspection and from the regulations made under section 400 other than those regulations respecting

(*a*) the construction of equipment and the class and quantity of various types of equipment to be carried;

(*b*) precautions against fire;

(*c*) the construction of hulls; and

(*d*) marking to show recommended safe limits for engine power and gross load capacity.

Règlements applicables aux yachts de plaisance

466. (1) Sous réserve du paragraphe (2), les yachts de plaisance sont exemptés de l'inspection annuelle et soustraits aux règlements établis sous le régime de l'article 400, à l'exception de ceux qui concernent

a) la construction de l'équipement, la classe et la quantité des divers types d'équipement requis à bord;

b) les précautions à prendre contre l'incendie;

c) la construction des coques; et

d) le marquage indiquant les limites de sécurité recommandées en ce qui concerne la puissance des moteurs et la capacité de charge brute.

Idem

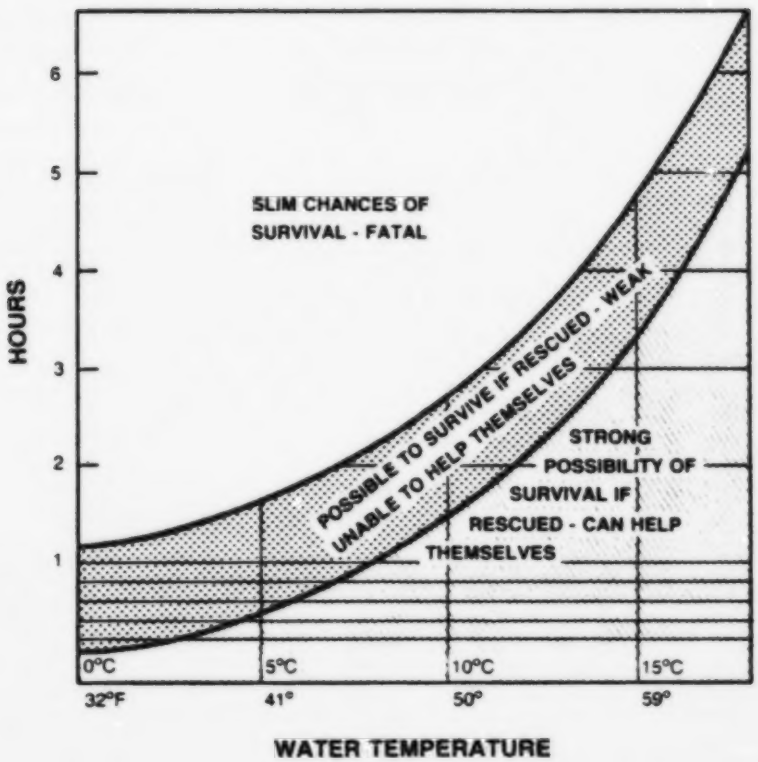
(2) Every pleasure yacht in excess of five tons gross tonnage that is fitted with a boiler for purposes of propulsion is subject to the requirements of this Part relating to the annual inspection of boilers. 1960-61, c. 32, s. 25.

Idem

(2) Tout yacht de plaisance d'une jauge brute de plus de cinq tonneaux, muni d'une chaudière servant d'organe de propulsion, est assujetti aux prescriptions de la présente Partie relatives à l'inspection annuelle des chaudières. 1960-61, c. 32, art. 25.

ANNEX II

COLD WATER SURVIVAL



The accompanying graph shows average predicted survival times of average, adult humans in water of different temperatures. The figures are based on experimental cooling of average men and women who were holding still in ocean water and wearing a standard lifejacket and light clothing. The graph shows, for example, that predicted survival time is about 2½-3 hours in water of 10°C (50°F). Predicted survival time is increased by extra body fat and decreased by small body size. Although women generally possess slightly more fat than men they cool slightly faster due to their usually small body size. However, for comparable sizes, the man will cool faster.

"COLD WATER SURVIVAL"
CANADIAN RED CROSS

ANNEX III

CANADA SHIPPING ACT

Small Vessel Regulations

Over 20 m in Length

21. (1) Every vessel over 20 m in length shall carry

(*a*) one approved small vessel lifejacket or approved personal flotation device for each person on board;

(*b*) two approved 762 mm diameter lifebuoys, one with a self-igniting light;

(*c*) one buoyant heaving line of not less than 27.5 m in length.

(*d*) six pyrotechnic distress signals of any Type and six pyrotechnic distress signals of Type A, B or C;

(*e*) one anchor with not less than 15 m of cable, rope or chain;

(*f*) four fire buckets;

(*g*) two fire axes;

(*h*) one power-driven pump located outside the machinery space with one fire hose and nozzle whereby a jet of water can be directed into any part of the vessel;

(*i*) efficient bilge pumping arrangements;

(*j*) in each accommodation space, one Class A II fire extinguisher but in no case need more than three such extinguishers be carried;

(*k*) in the machinery space, two Class B II fire extinguishers, one located near the entrance.

(2) Every vessel over 20 m in length shall be fitted with navigation lights and sound signalling apparatus that permit the vessel to comply with the *Collision Regulations*.

APPENDICE III

LOI SUR LA MARINE MARCHANDE DU CANADA

Règlement sur les petits bâtiments

Plus de 20 m de longueur

21. (1) Tout bâtiment de plus de 20 m de longueur doit avoir

a) un gilet de sauvetage approuvé pour petits bâtiments ou un vêtement de flottaison individuel approuvé pour chaque personne à bord;

b) deux bouées de sauvetage approuvées de 762 mm de diamètre, dont l'une sera munie d'un feu à allumage automatique;

c) une ligne d'attrape flottante d'au moins 27,5 m de longueur;

d) six signaux pyrotechniques de détresse de n'importe quel type et six signaux pyrotechniques de détresse du type A, B ou C;

e) une ancre avec au moins 15 m de câble, de cordage ou de chaîne;

f) quatre seaux à incendie;

g) deux haches d'incendie;

h) une pompe mécanique, à l'extérieur de la chambre des machines, munie d'une manche d'incendie et d'un ajutage permettant de diriger un jet d'eau dans n'importe quelle partie du bâtiment;

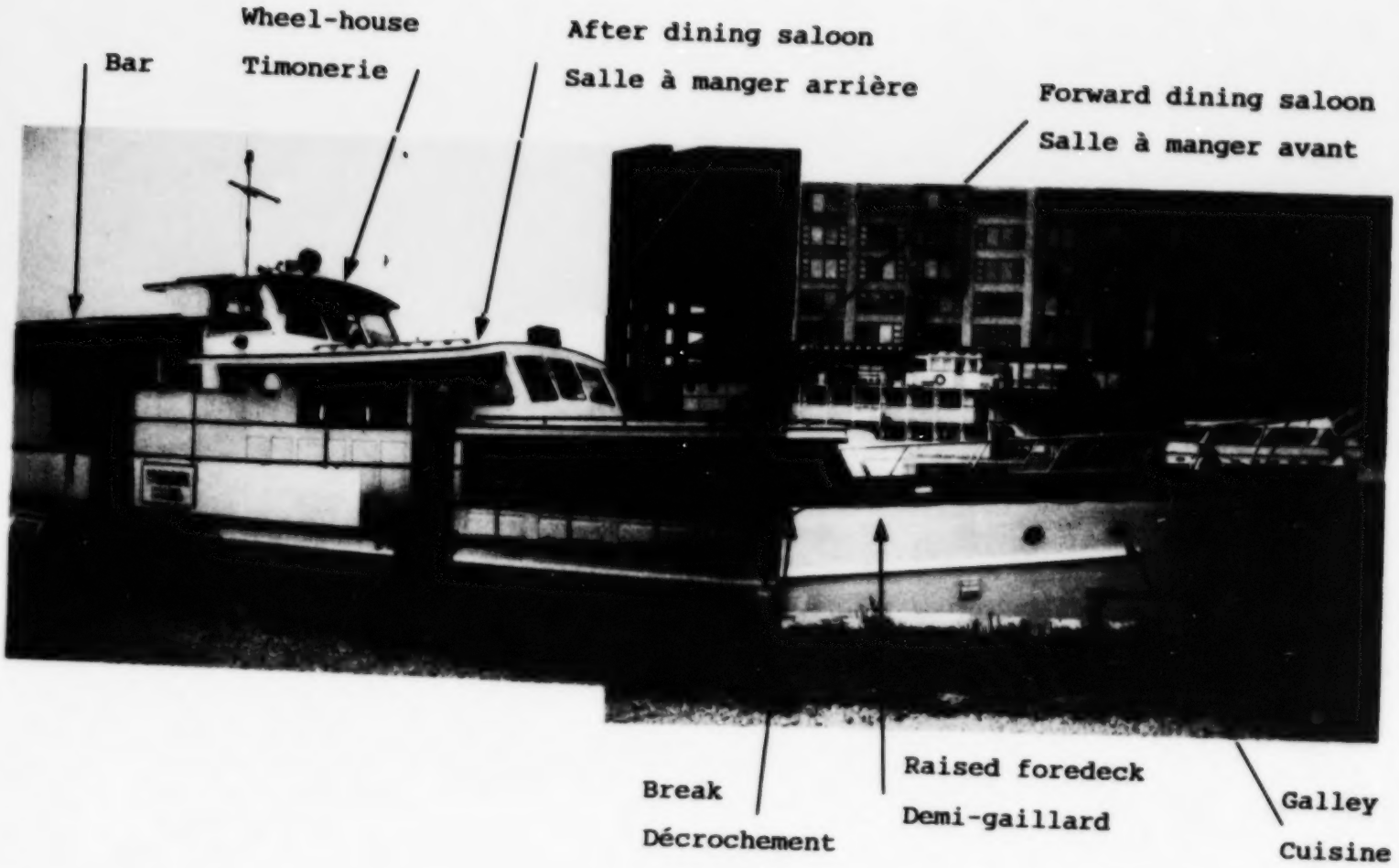
i) des installations d'épuisement de cale efficaces;

j) dans chaque local habité, un extincteur de classe A II, sans cependant qu'il soit jamais nécessaire qu'il y ait à bord plus de trois extincteurs de ce genre;

k) dans la chambre des machines, deux extincteurs de classe B II, dont l'un près de l'entrée.

(2) Tout bateau de plus de 20 m de longueur doit être muni de feux de navigation et d'un appareil de signalisation sonore qui lui permettent de se conformer au *Règlement sur les abordages*.

"SOUTHERN STAR II"

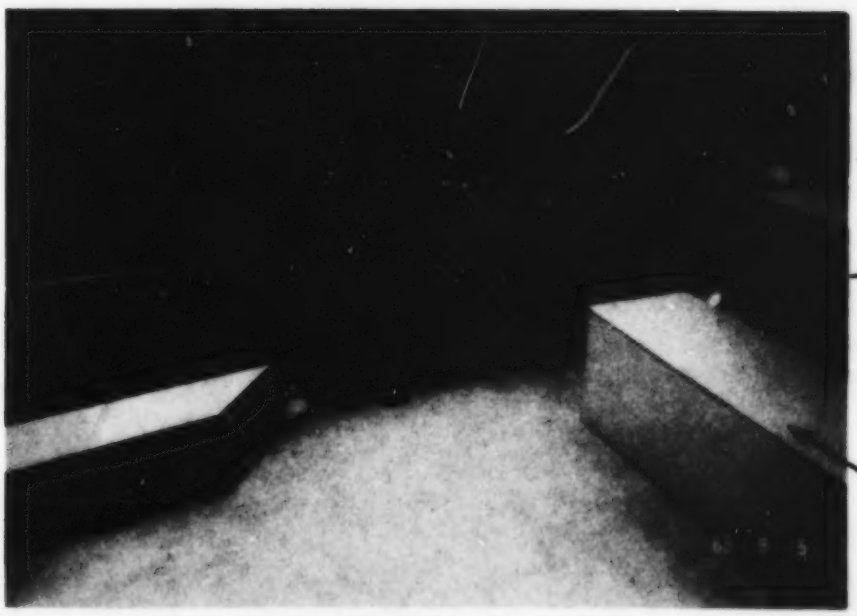

Bar
Wheel-house
Timonerie
After dining saloon
Salle à manger arrière
Forward dining saloon
Salle à manger avant
Break
Décrochement
Raised foredeck
Demi-gaillard
Galley
Cuisine

Side bench.

Banc de côté.

Forecastle or break. Starboard side railing.

Gaillard d'avant ou décrochement. Garde-corps tribord.



Exit to after end between seat and railing.

Accès à l'arrière entre le banc et le garde-corps.

Locker and seat.

Coffre et siège.

Passenger fell overboard here.

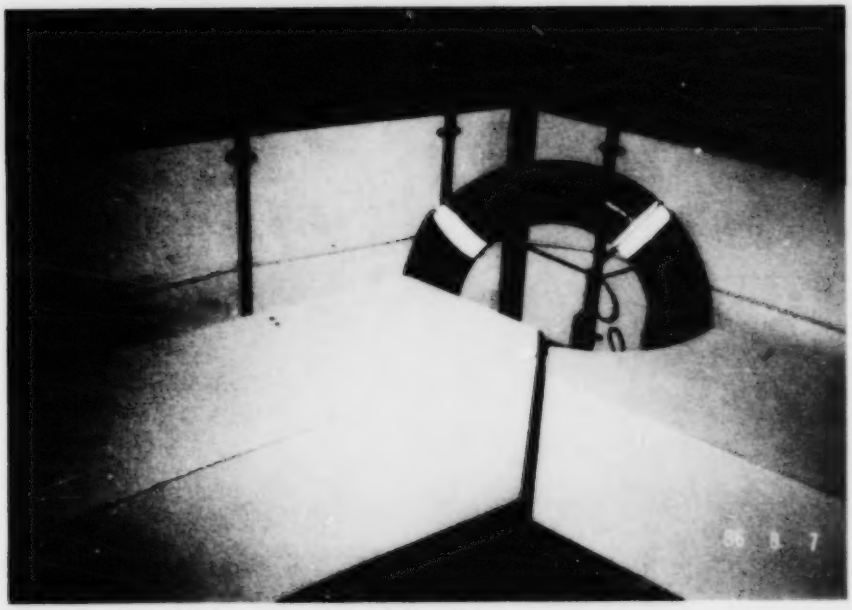
Passager a tombé à la mer ici.

Looking forward towards area where man lost his balance.

Vue vers l'avant où l'homme a perdu l'équilibre.

Looking aft. Vue vers l'arrière.

Swim platform. Parquet de baignade.



Lifebuoy with light located on starboard quarter.

Bouée de sauvetage munie d'un feu sur la hanche tribord.

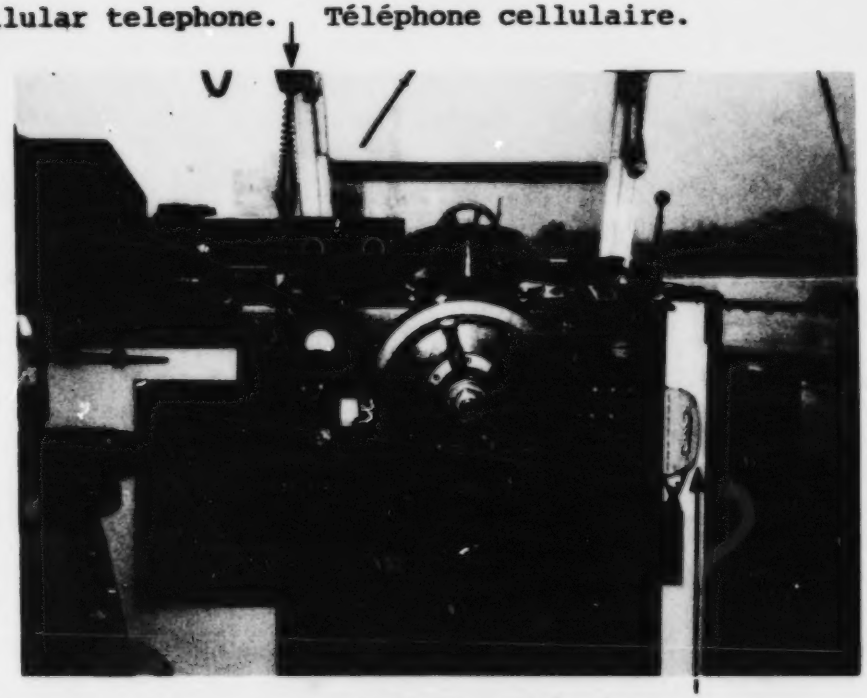
Looking forward into galley.

Vue vers l'avant dans la cuisine.

Looking towards after dining room.

Vue vers la salle à manger arrière.

Cellular telephone. Téléphone cellulaire.



Intercom telephone.

Interphone.